

## WHAT IS CLAIMED IS:

1. A method of managing quality of service in a mobile radio network in which protocols for communication over terrestrial interfaces comprise a radio network layer and  
5 a transport network layer and wherein quality of service management includes quality of service management linked to the radio network layer and quality of service management linked to the transport network layer, said method comprising:
  - 10 - a step in which a first network element signals to a second network element by means of the radio network layer signaling protocol at least one parameter representative of transport quality of service or of quality of service for the transport network layer, and
  - 15 - a step in which the second network element uses said at least one parameter for transport quality of service management.
2. A method according to claim 1, wherein said first  
20 network element is a controlling radio network controller.
3. A method according to claim 2, wherein said second network element is a Node B or a base station.
- 25 4. A method according to either claim 2 or claim 3, wherein said radio network layer signaling protocol is a Node B Application Part protocol applicable to the Iub interface between the controlling radio network  
30 controller and the Node B.
5. A method according to any one of claims 2 to 4, wherein said second network element uses said at least one parameter for transport quality of service management  
35 for uplink transmission over the Iub interface between the controlling radio network controller and the Node B.

6. A method according to claim 1, wherein said first network element is a serving radio network controller.

7. A method according to claim 6, wherein said second  
5 network element is a drift radio network controller.

8. A method according to either claim 6 or claim 7,  
wherein said radio network layer signaling protocol is a  
Radio Network Subsystem Application Part signaling  
10 protocol applicable to the Iur interface between the  
serving radio network controller and the drift radio  
network controller.

9. A method according to any one of claims 6 to 8,  
15 wherein said second network element uses said at least  
one transport quality of service management parameter for  
uplink transmission over the Iur interface between the  
serving radio network controller and the drift radio  
network controller and/or downlink transmission over the  
20 Iub interface between the drift radio network controller  
and the Node B.

10. A method according to any one of claims 1 to 9,  
wherein said at least one parameter representative of  
25 transport quality of service is a specific parameter  
intended to indicate a transport quality of service  
level.

11. A method according to any one of claims 1 to 9,  
30 wherein said at least one parameter representative of  
transport quality of service is at least one radio access  
bearer parameter that may also be used as a transport  
quality of service parameter.

35 12. A method according to claim 11, wherein said at least  
one radio access bearer parameter that may also be used  
as a transport quality of service parameter is the

transfer delay.

13. A method according to claim 11, wherein said at least one radio access bearer parameter that may also be used  
5 as a transport quality of service parameter is the traffic handling priority.

14. A method according to claim 11, wherein said at least one radio access bearer parameter that may also be used  
10 as a transport quality of service parameter is the traffic class.

15. A method according to any one of claims 11 to 14, wherein said at least one radio access bearer parameter  
15 that may also be used as a transport quality of service parameter is copied or translated from the RANAP protocol to the NBAP protocol, respectively from the RANAP protocol to the RNSAP protocol.

20 16. A method according to any one of claims 1 to 9, wherein said at least one parameter representative of transport quality of service is at least one parameter that may be associated with a transport quality of service level or at least one radio access bearer  
25 parameter that may also be used as a transport quality of service parameter.

17. A method according to claim 16, wherein said at least one parameter that may be associated with a transport  
30 quality of service level or at least one radio access bearer parameter that may also be used as a transport quality of service parameter is a time adjustment parameter, the lowest values of said parameter being assigned to connections having the highest transfer delay  
35 and/or traffic handling priority constraints and the highest values of said parameter being assigned to connections having the highest transfer delay and/or

traffic handling priority constraints.

18. A method according to claim 17, wherein said time  
adjustment parameter is the time of arrival window start  
5 parameter.

19. A method according to claim 16, wherein said at least  
one parameter that may be associated with a level of  
transport quality of service or at least one radio access  
10 bearer parameter that may also be used as a transport  
quality of service parameter includes at least one  
parameter representative of the number of dedicated  
channels allocated to a connection, a high number of  
dedicated channels being allocated to connections having  
15 high transfer delay and/or traffic handling priority  
constraints and a lower number of dedicated channels  
being allocated to connections having lower transfer  
delay and/or traffic handling priority constraints.

20. A network element comprising means for implementing a  
method according to any one of claims 1 to 19.

21. A network element according to claim 20, in the form  
of a controlling radio network controller.

22. A network element according to claim 20, in the form  
of a serving radio network controller.

23. A network element according to claim 20, in the form  
30 of a drift radio network controller.

24. A network element according to claim 20, in the form  
of a Node B.